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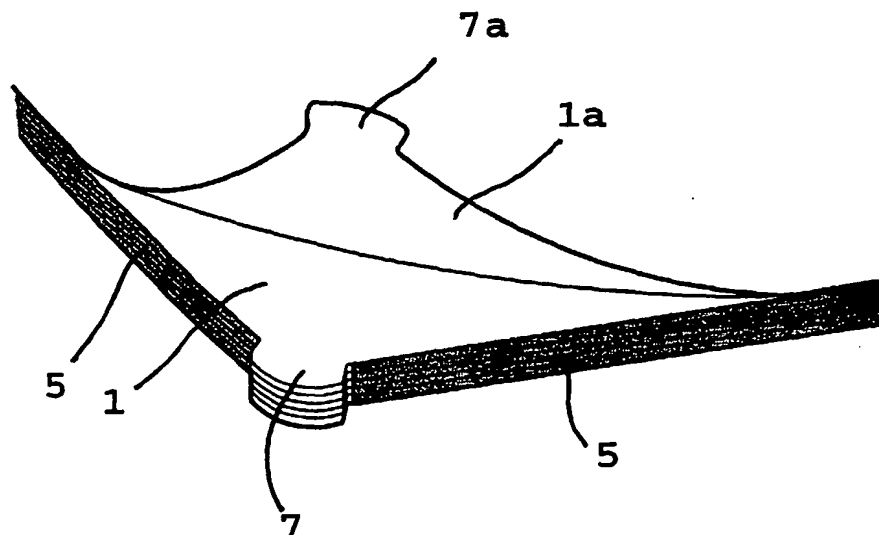
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For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: MAT



(57) **Abstract:** The present invention relates to a mat, especially a car mat or a door mat. It is significant of the mat according to the present invention that it comprises a number of layers (1, 1a) where each layer (1, 1a) comprises a barrier sheet (9) and an absorbing sub-layer (10) provided on top of the barrier sheet (9), and that the layers (1, 1a) are mutually connected along the edges of the mat.

MAT**Technical Field of the Invention**

The present invention relates to a mat, especially a car
5 mat or a door mat.

Prior Art

It is previously known car mats that are intended to be
located ahead of the seats of a car, said mats being intended
10 to receive dirt, water, snow and the like that loosen from the
shoes of the driver/the passengers. The mats are loose and
may be taken out for cleaning. The mats usually consist of
rubber/plastic and sometimes they are equipped with an upper
textile layer to imitate the interior fitting of the car
15 adjacent the car mats. Also the car mats that are equipped
with a textile layer may be taken out for cleaning.

It is also previously known door mats that normally has
a substrate/bottom side of rubber/plastic and a textile layer
on top of the substrate, said textile layer may be of a
20 needle-felt type. Such door mats also need to be cleaned at
regular intervals since they receive quite a lot of dirt,
water and snow when entering persons wipe off their shoes on
these door mats.

25 Objects and Features of the Invention

A primary object of the present invention is to present
a mat for the above defined purpose, said mat, without
cleaning, may upon desire be brought to expose an un-used
surface layer.

30 Still an object of the present invention is that the
handling of the mat should be extremely user-friendly.

A further object of the present invention is that it
should have a good ability to absorb moisture and retain dirt.

At least the primary object of the present invention is
35 realised by means of a mat that has being given the features
of the appending independent claim 1. Preferred embodiments
of the invention are defined in the dependent claims.

Brief Description of the Drawings

Below an embodiment of the invention will be described, reference being made to the accompanying drawings, where:

Figure 1 shows a perspective view of a car mat according to the present invention;

Figure 2 shows a detail of a corner of the car mat, the top layer of the car mat being elevated in the area of the corner; and

Figure 3 shows a section through a portion of a layer of the car mat.

Detailed Description of a Preferred Embodiment of the Invention

The car mat according to the present invention, shown in figures 1-3, comprises a number of layers 1, a portion of a layer 1 being shown in section in figure 3. Normally, the car mat according to the present invention comprises 5-15 layers that are arranged on top of each other.

As is evident from figure 1 the car mat according to the present invention has an external contour that is adapted to the space, in which the car mat is to be placed. In the shown embodiment a corner of the car mat has a cut away portion 3. The contour of the car mat according to the present invention may of course vary depending on the shape of the space in question, which varies for different car models.

In figure 2 a corner of a car mat according to the present invention is shown in detail and it is evident from figure 2 that the car mat according to the present invention consists of a number of layers 1. The layers 1 that constitute the car mat according to the present invention are mutually connected by glue barriers 5 applied at the edge portions of the car mat, said glue barriers 5 extending in principle along all edge portions of the car mat according to the present invention. In figure 1 the glue barriers 5 are indicated by means of grey zones. In the corner portion shown in figure 2 each layer 1 is equipped with a projecting tab 7 that constitutes as grip means when a worn out layer 1 is to be removed. In figure 2 this has been indicated by elevating the top layer 1a in the area of the corner. When the top

layer is removed it will loosen from the edge portions of the car mat along in principle the entire circumference of the car mat. As is evident from figure 2 the glue barriers 5 are not applied in the areas of the tabs 7. The reason therefore is that the tabs 7 should be free in order to make it easy for the operator to grab the tab 7a.

Generally, the glue barriers 5 are provided to hold the layers 1 together to create a car mat that is relatively compact in height. Further, the function of the glue barriers 5 is to prevent moisture and a dirt to enter between the individual layers 1 that the car mat according to the present invention constitutes of. The glue barriers 5 are principally like the glue barriers that are provided on for instance glued note pads. However, in certain aspects higher demands are made upon the glue barriers 5 according to the present invention since they must prevent entering of for instance moisture and dirt. Of course corresponding demands are not present as regards the glue barriers of glued note pads.

In figure 3 the structure of a layer 1 is schematically shown, a car mat according to the present invention being constituted by a number of such layers 1, see figure 2. As is evident from figure 3 layer 1 comprises at the bottom a barrier sheet 9 that normally is made of rubber or plastic. The barrier sheet 9 should be impermeable to moisture. The barrier sheet 9 should also have a certain inherent stiffness/stability to serve as a substrate of the layer 1.

On top of the barrier sheet 9 an absorbing sub-layer 10 is provided, said sub-layer 10 having an ability to absorb and retain liquid/moisture. Generally, the absorbing sub-layer 10 may be compared to a corresponding layer in a sanitary towel of compact dimensions.

A net 11 is provided on top of the absorbing sub-layer, said net being relatively fine-meshed to prevent that gravel, sand and the like from the shoes of the driver/passengers should contact the absorbing sub-layer 10. Thus, the aim is to make gravel, sand and the like to stay on top of the net 11. If needed, these particles may be removed by taking the car mat out of the car and for instance shake the car mat.

As regards the cooperation between the different sub-layers the barrier sheet 9 and the absorbing sub-layer 10 are preferably mutually connected by glueing. This guarantees that the absorbing sub-layer 10 is not displaced relative to the barrier sheet 9 when the user braces his feet against the car mat. The net 11 is preferably attached to the barrier sheet 9 along the edges of the car mat. On the contrary the net 11 may rest loosely against the absorbing sub-layer 10.

A car mat according to the present invention functions in the following way. A car mat that consists of several layers 1, see figure 1, is placed at an intended location in a car, said car mat functioning as a car mat according to prior art. In this connection it should be pointed out that a car mat according to the present invention should be designed in such a way that the tabs 7 are facing outwards, i.e. they are located adjacent the entrance of the vehicle. When the user determines that the top layer is worn out, e.g. that the absorbing sub-layer 10 is saturated by moisture and/or that the net 11 has damages, the user may in a simple way remove the top layer 1. In connection therewith the user grabs the tab 7a and pulls the top layer 1a upwards, see figure 2, whereby the edges of the top layer 1a will loosen from the rest of the car mat. When the top layer 1a is completely loosened from the rest of the car mat the top layer 1a is thrown away at a suitable place. Preferably, each layer 1 constitutes solely of material that may be recycled.

When loosening the top layer 1a it is also feasible that a roll is made of said layer 1a, the benefit being that the material that is located on top of the net 11 is not falling off the net in connection with the loosening.

When the top layer 1a has been removed the car mat according to the present invention will expose an un-used top layer 1a and the car mat is again ready for use.

When all the layers of the car mat according to the present invention has been removed the car mat according to the present invention is consumed and a new car mat according to the present invention preferably comes into use.

Feasible Modifications of the Invention

In the embodiment described above the net 11 is not connected to the absorbing sub-layer 10. However, within the scope of the present invention it is also feasible that the net 11 and the absorbing sub-layer 10 are mutually connected and that the absorbing sub-layer 10 is not connected to the barrier sheet 9. However, also in this case the net 11 must be connected to the barrier sheet 9 along the edges of the car mat.

The embodiment described above relates to a car mat. However, a door mat may principally be designed in the same way. However, in such a case the net should be especially wear resistant or if the net is missing the absorbing sub-layer must be especially wear resistant. The reason therefore is that when using a door mat one wipes off the shoes by scrubbing these against the door mat a number of times.

Claims

1. Mat, especially a car mat or a door mat, said mat comprising a number of layers (1, 1a) where each layer (1, 1a) comprising an absorbing sub-layer (10), and that the layers (1, 1a) are mutually connected along the edges of the mat, characterized in that each layer (1, 1a) comprises a barrier sheet (9) provided below the absorbing sub-layer (10), and that each layer (1, 1a) comprises a net (11) provided on top of the absorbing sub-layer (10).

2. Mat according to claim 1, characterized in that the net (11) is connected to the barrier sheet (9) along its edges.

3. Mat according to any of the previous claims, characterized in that the layers (1, 1a) are mutually connected by means of a glue barrier (5).

4. Mat according to claim 3, characterized in that the glue barrier (5) constitutes a moisture barrier.

5. Mat according to any of the previous claims, characterized in that each layer (1; 1a) has a tab (7, 7a) in the area of a corner.

6. Mat according to any of the previous claims, characterized in that in each layer (1, 1a) the barrier sheet (9) and the absorbing sub-layer (10) are mutually connected by glueing.

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Fig 1

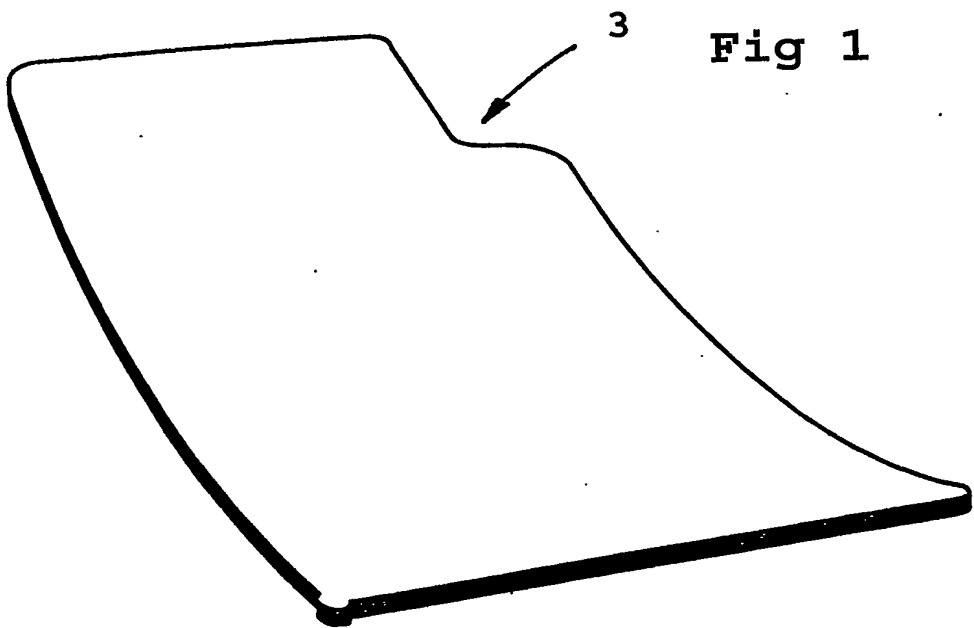


Fig 2

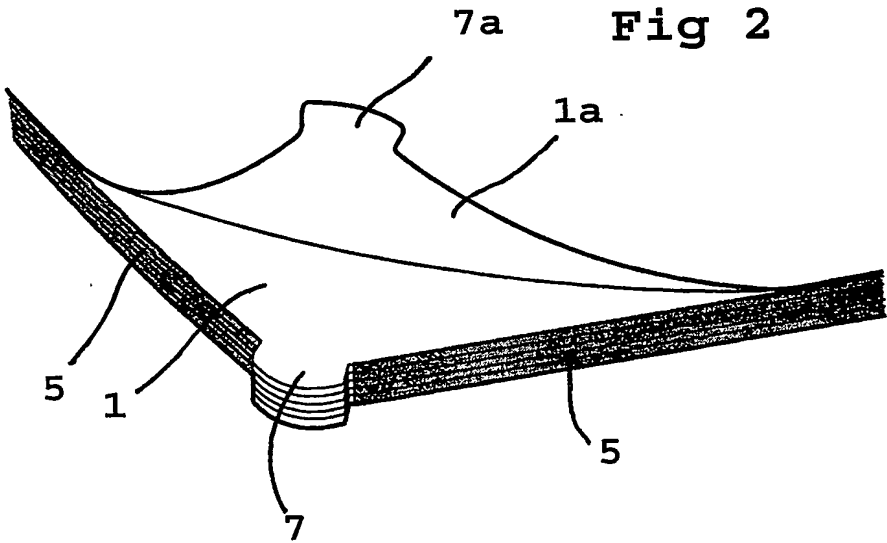
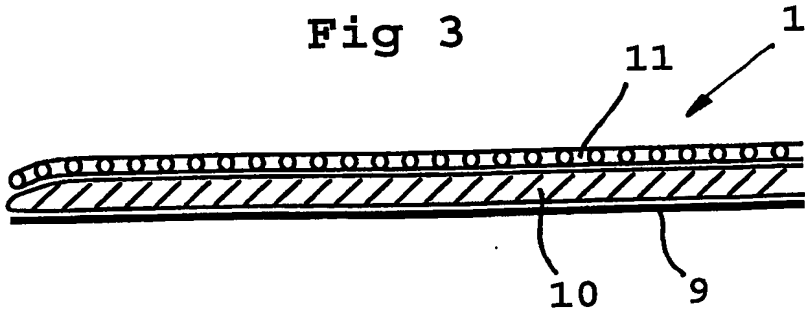


Fig 3



INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 03/01020

A. CLASSIFICATION OF SUBJECT MATTER

IPC7: B60N 3/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: B60N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-INTERNAL, WPI DATA, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	GB 2343842 A (GAVIN ALSTON BADDERLY RENTON), 24 May 2000 (24.05.00) --	1-6
A	WO 0051841 A1 (GLOWNIAK, M.), 8 Sept 2000 (08.09.00) --	1-6
A	EP 0379630 A1 (SAGONA, M.), 1 August 1990 (01.08.90) --	1-6
A	DE 29918985 U1 (VIERING, JENTSCHURA & PARTNER), 2 March 2000 (02.03.00) --	1-6

☒ Further documents are listed in the continuation of Box C.
 ☒ See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier application or patent but published on or after the international filing date	"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search	Date of mailing of the international search report
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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 3665543 A (J.J. NAPPI), 30 May 1972 (30.05.72) -- -----	1-6

INTERNATIONAL SEARCH REPORT
Information on patent family members

26/07/03

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Patent document cited in search report			Publication date	Patent family member(s)	Publication date
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WO	0051841	A1	08/09/00	AU 2834600 A PL 331805 A	21/09/00 11/09/00
EP	0379630	A1	01/08/90	IT 1228504 B IT 8919151 D	19/06/91 00/00/00
DE	29918985	U1	02/03/00	NONE	
US	3665543	A	30/05/72	JP 6505038 T	09/06/94